

ABSTRACT

Probe sets for the multiplexed detection of the binding of, or interaction between, one or more ligands and target antigens are provided. Detection involves the release of identifying tags as a consequence of target recognition. The probe sets include electrophoretic tag probes or e-tag probes, comprising a detection region and a mobility-defining region called the mobility modifier, both linked to a target-binding moiety. Target antigens are contacted with a set of e-tag probes and the contacted antigens are treated with a selected cleaving agent resulting in a mixture of e-tag reporters and uncleaved and/or partially cleaved e-tag probes. The mixture is exposed to a capture agent effective to bind to uncleaved or partially cleaved e-tag probes, followed by electrophoretic separation. In a multiplexed assay, different released e-tag reporters may be separated and detected providing for target identification.